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Corpsmen Talk: Preventing Heat Injuries

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U.S. Marines with 2nd Light Armored Reconnaissance Battalion carry water to their tent at Camp Afghanistan. Hydration is a vital part of everyday life because of the heat. (DoD photo by Lance Cpl. Marine Corps/Released)

During my time as a hospital corpsman, I've seen numerous heat-related injuries, ranging from mild sunburn to full-blown heat stroke. If you have ever experienced a heat-related injury, you know that it is not fun. What you may not know is that with the right personal protective equipment all heat injuries are preventable.

One particular experience with heat stroke I will never forget involves a very good friend and shipmate. It provides an example of how factors other than the temperature outside, such as dehydration, can cause a heat-related injury. While performing a physical readiness test (PRT) before dawn, my shipmate collapsed and was rushed to the emergency room.

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February 2015 (11)

January 2015 (12)

December 2014 (17)

November 2014 (11)

At the hospital, his core temperature registered at 106 degrees Fahrenheit, indicating he was suffering from heat stroke. As you can imagine, my shipmate spent quite some time in the ICU recovering from the physiological damage. A high core temperature that results in heat stroke can cause damage to the heart, kidneys, muscles, brain and nervous system. Once the cooling center of the brain (hypothalamus) is damaged by heat injury, it has a harder time controlling the body's core temperature, which significantly increases a person's risk for heat-related injuries in the future. To this day, he must be very cautious when spending time outdoors, and even indoors, to ensure he does not become overheated.

While this story may be alarming, it's important to realize that with the proper preparation and precautions, all heat-related injuries are preventable.

As Sailors and Marines, we often work or exercise outside in some pretty warm weather. We can prepare for this by acclimatizing appropriately, spending 10 to 14 days gradually increasing the intensity and duration of outdoor workouts when the temperatures start to rise. This is important because when we exert ourselves, many physiological changes occur: our heart beats faster, our respiration rate increases, our body temperature rises, and our internal cooling system (AKA sweat) kicks in.

Since the same changes happen when we are outside in the heat, we must be careful not to overload our bodies with too much stress too quickly. Being physically fit from the start makes the acclimatization process much easier and decreases your risk of suffering heat stress, exhaustion or stroke. However, just like you do preventive maintenance on that multimillion dollar jet engine to ensure the pilot can safely perform the mission, you need to perform preventive maintenance on your body to stay mission ready.

For example:

- Stay active, eat properly to fuel your body, and maintain adequate hydration at all times.
- Lay off of the energy drinks and supplements. These increase your heart rate and cause you to sweat even more, inhibiting your ability to cool off.
- Be sure to drink 8 – 16 ounces of fluids for every hour you are exerting yourself in the heat. If you're going to be working in the field or on the flight deck, consider wearing a camel back filled with cool water.
- Use sports drinks if you sweat profusely to replace the minerals lost in sweat that help prevent muscle cramping.
- Wear light and loose fitting clothing when exercising outside so heat can escape and sweat can evaporate allowing your body to cool off.

If my friend had taken the proper precautions, there is a good possibility that he would not have suffered a heat stroke. Luckily, he recovered. But imagine if his story ended differently and we lost a shipmate. I know I would have been personally devastated and the Navy would have lost a great Sailor to a very preventable injury.

Editor's note: Chief McDevitt is currently a Chief Independent Duty Corpsman (IDC) at the Navy and Marine Corps Public Health Center (NMCPHC). She was previously assigned onboard the USS THEODORE ROOSEVELT (CVN-71) and recently returned from an Individual Augmentee (IA) assignment to Manda Bay, Kenya.

To learn more about heat injuries and how to prevent them, visit the Navy and Marine Corps Public Health Center's Health Promotion and Wellness Injury and Violence Free Living page [here](#).

October 2014 (15)

September 2014 (20)

August 2014 (14)

July 2014 (13)

June 2014 (8)

May 2014 (11)

April 2014 (9)

March 2014 (14)

February 2014 (7)

January 2014 (7)

December 2013 (7)

November 2013 (12)

October 2013 (7)

September 2013 (14)

August 2013 (13)

July 2013 (11)

June 2013 (22)

May 2013 (15)

April 2013 (14)

March 2013 (14)

February 2013 (14)

January 2013 (12)

December 2012 (11)

November 2012 (11)

October 2012 (7)

September 2012 (9)

August 2012 (12)

July 2012 (13)

June 2012 (17)

May 2012 (22)

April 2012 (14)

March 2012 (13)

February 2012 (14)

January 2012 (13)

December 2011 (13)

November 2011 (20)

October 2011 (22)

September 2011 (12)

August 2011 (16)

July 2011 (10)

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